

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BLACK POND	Lake Area (ha): 24.28
Town: WINDSOR	Maximum depth (m): 5.3
County: Hillsborough	Mean depth (m): 1.9
River Basin: Merrimack	Volume (m <sup>3</sup> ): 646500
Latitude: 43°06'41" N	Relative depth: 0.8
Longitude: 72°00'58" W	Shore configuration: 1.10
Elevation (ft): 1058	Areal water load (m/yr): 14.58
Shore length (m): 2300	Flushing rate (yr <sup>-1</sup> ): 7.80
Watershed area (ha): 800.4	P retention coeff.: 0.51
% watershed ponded: 0.6	Lake type: natural w/dam

BIOLOGICAL:

16 January 2003

31 July 2002

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 95%	ASTERIONELLA 35%
	#2		TINY PENNATE DIATOM 30%
	#3		RHIZOLENIA 20%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			7.91
DOM. ZOOPLANKTON (% TOTAL)	#1	CILIATE SPP. 82%	NAUPLIUS LARVA 32%
	#2	KELICOTTIA 15%	COLLOTHECA 24%
	#3		KERATELLA 23%
ROTIFERS/LITER		38	164
MICROCRUSTACEA/LITER		<1	93
ZOOPLANKTON ABUNDANCE (#/L)		204	257
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			1.4
BOTTOM DISSOLVED OXYGEN (mg/L)		3.8	0.9
BACTERIA (E. coli, #/100 ml)	#1		10
	#2		< 10
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.5  
Hypolimnion volume (m<sup>3</sup>): None  
Anoxic volume (m<sup>3</sup>): 82250

**CHEMICAL:**

Lake: BLACK POND  
Town: WINDSOR

	16 January 2003		31 July 2002		
DEPTH (m)	1.5	3.0	1.0		3.0
pH (units)	5.1	5.2	5.9		5.6
A.N.C. (Alkalinity)	1.6	1.7	1.2		3.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN			0.50		0.40
TOTAL PHOSPHORUS	0.011	0.012	0.018		0.020
CONDUCTIVITY ( $\mu$ mhos/cm)	23.6	23.4	17.7		17.4
APPARENT COLOR (cpu)	70	75	90		90
MAGNESIUM			0.30		
CALCIUM			1.6		
SODIUM			1.4		
POTASSIUM			< 0.40		
CHLORIDE	< 3	< 3	< 3		< 3
SULFATE	3	3	2		2
TN : TP			28		20
CALCITE SATURATION INDEX			5.1		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 2002**

D.O. S.D. PLANT CHL TOTAL CLASS

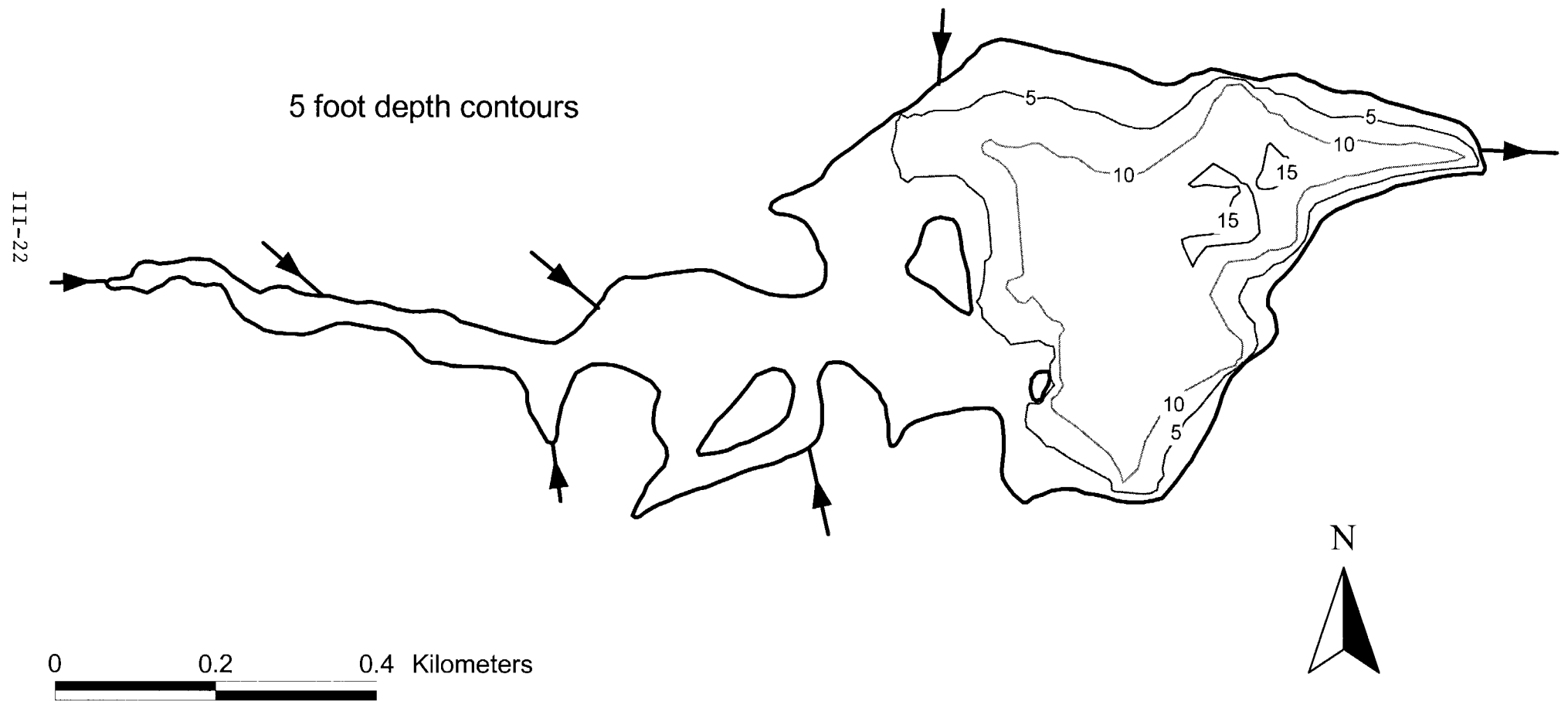
**	4	4	1	9	Meso.
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**COMMENTS:**

1. Previously surveyed in 1982. There was little change in trophic parameters between the two years – the pond was borderline meso/eutrophic in both years.
2. This is a dark tea-colored moderately acidic pond.
3. Poor access; boat was placed in over the bank next to the dam.
4. Little development on the pond – two juvenile camps and a few cottages.

# Black Pond

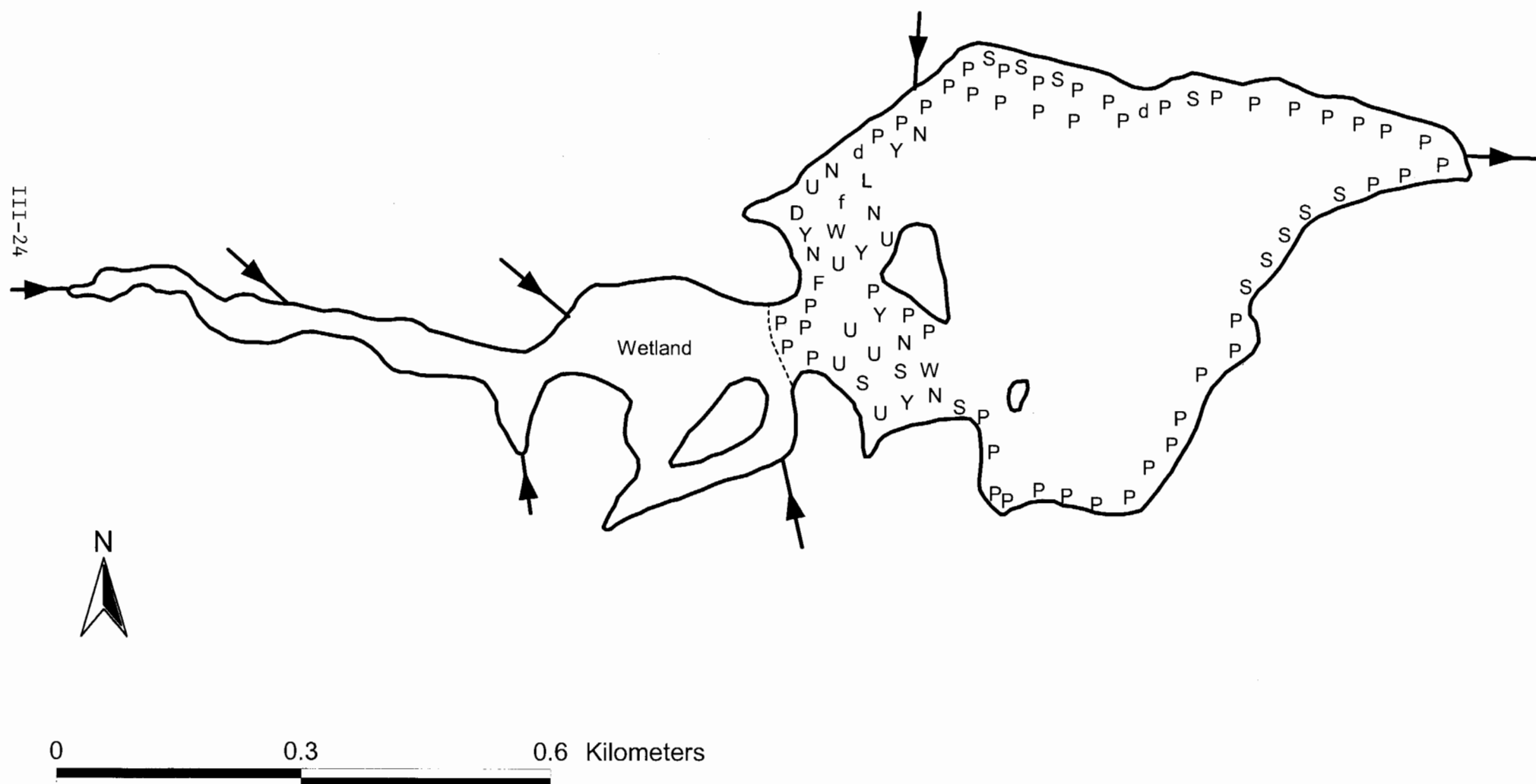
## Windsor



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# Black Pond

# Windsor



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